

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-002363**Date Inspected:** 13-May-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Wang Sai Fa and Lvliqing**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG and SAS Tower Fabrication**Summary of Items Observed:**

On this date, Caltrans Office of Structural Material (OSM) Quality Assurance (QA) Inspector Joselito Lizardo was present as requested to perform observations on the fabrication of Orthotropic Box Girder (OBG) and SAS Tower at Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China.

Bay Number 7: Floor Beams

The QA Inspector has randomly observed the following activities on this Bay;

This QA Inspector observed Complete Joint Penetration (CJP) Flux Cored Arc Welding (FCAW) on flange splice of floor beam FB003-036-104. It was welded by Liu Long Xian (ID# 044786). Welder was using procedure WPS-B-T-2231-B-U2-F and parameters noted were 307Amps, 30.2Volts with travel speed of 307mm/min. Quality Control Inspector was observed taking parameters and monitoring the welder.

This QA Inspector observed fillet welding with Flux Cored Arc Welding (FCAW) using procedure WPS-B-T-2133-3 on various locations. These were noted on floor beams marked FB003-026 web to top/bottom flange, FB003-024 to 026 stiffener plates to flange and web, and FB005-007-015. These were welded by qualified welders and identified with ID#s 066236 and 067036.

This QA Inspector observed Submerged Arc Welding (SAW) on splice plates identified as FB028-001-080 being welded by Huang Xin Lan (ID# 044780) using procedure WPS-B-T-2221-B-U2C-S-1. The parameters observed were 507Amps, 31Volts with 428mm/min travel speed. QC/CWI was also observed taking parameters and

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monitoring the welder.

This QA Inspector also observed tacking/fit-up of stiffener plates, bent plate/flange and web plate to flange. The procedure WPS-B-P-2112 was used and the qualified welders noted were ID# 066179 and 058102. Location of tacking/fit-up observed were on FB003-43 and FB003-044.

Bay number 8: Tower Diaphragms

The QA Inspector has randomly observed the following activities on this Bay;

Caltrans QA Inspector observed Flux Cored Arc Welding (FCAW) on splice plates intended for diaphragm ring marked SSDI-SA-326 weld number 4A and 9B. The welder was identified by his ID# 045240 and used a procedure WPS-B-T-2233-B-U3-F. Welding parameters noted were 202Amps, 25.7Volts with 110mm/min travel speed and deemed acceptable to project requirements.

QA Inspector J. Lizardo observed hot bending using oxy-acetylene on heavy plates/flanges with the aid of hydraulic ram and welded jig. These plates are intended for diaphragm ring that will be spliced together. ZPMC QC was seen at the vicinity of the work area monitoring the heat input onto these plates. On separate location, bevel cutting of three diaphragm plates with 75mm thickness was also observed. Another observation was pre-assembly of heavy plates intended for diaphragm ring marked ESDI-SA266 which just started.

Bay number 3: New Tower

Magnetic Particle Test (MT) on deck panel 53 U90/U20 weld repairs was performed by this QA Inspector. Holding powder/indications were noted due to cold roll on repair welds. Some weld underfill was also noted.



Summary of Conversations:

No significant conversation occurred today.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials

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for your project.

Inspected By: Lizardo, Joselito

Quality Assurance Inspector

Reviewed By: Cochran, Jim

QA Reviewer